

**REMARKS**

Applicants submit that by the present Amendment and Remarks, this Application is placed in clear condition for immediate allowance. Further, the present Amendment merely changes the dependency of claim 39 so that it no longer depends from a cancelled claim. Accordingly, the present Amendment does not generate any new matter issue or any new issue for that matter. Applicants, therefore, solicit entry of the present Amendment and Remarks, and favorable consideration, pursuant to the provisions of 37 C.F.R. § 1.116.

Claims 2 through 79 are pending in this Application, of which claims 13 through 27, 35 through 40 and 42 through 44 stand withdrawn from consideration pursuant to the provisions of 37 C.F.R. § 1.142(b). Accordingly, claims 2 through 12, 28 through 34, 39, 41 and 45 through 79 are active.

Claim 39 has been amended to change the dependency from claim 1 to claim 3. Applicants submit that the present Amendment does not generate any new matter issue or any new issue for that matter.

**Claims 39 and 41 were rejected under the fourth paragraph of 35 U.S.C. § 112.**

This rejection is traversed. In response claim 39, upon which claim 41 depends, has been amended to change the dependency from cancelled claim 1 to claim 3, thereby overcoming the stated basis for the imposed rejection.

Applicants, therefore, submit that the imposed rejection of claims 39 and 41 under the fourth paragraph of 35 U.S.C. § 112 is not viable and, hence, solicit withdrawal thereof.

**Claims 2 through 12, 28 through 34, 39, 41 and 45 through 79 were rejected under the first paragraph of 35 U.S.C. § 112 for lack of adequate enabling support.**

In the statement of the rejection the Examiner asserted that the expression “for collectively amplifying ... a wavelength of 1610 nm or longer” is an open ended numerical expression inclusive of IR, microwave and radio radiation, for which there is no enabling support. This rejection is traversed.

Lack of enablement under the first paragraph of 35 U.S.C. § 112 is a question of law. *U.S. Steel Corp. v. Philips Petroleum Co.*, 865 F.2d 1247, 9 USPQ2D 1461 (Fed. Cir. 1989); *U.S. v. Telectronics Inc.*, 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988). In rejecting a claim under the first paragraph of 35 U.S.C. § 112 for lack of adequate enabling support, it is incumbent upon the Examiner to establish a basis in fact and/or cogent technical reasoning to support the ultimate legal conclusion that one having ordinary skill in the art would not be able to practice the claimed invention, armed with the supporting specification, without undue experimentation. *In re Cortright*, 165 F.3d 1353, 49 USPQ2d 1464 (Fed. Cir. 1999); *In re Brana*, 51 F.2d 1560, 34 USPQ2d 1436 (Fed. Cir. 1995); *In re Marzocchi*, 439 F.2d 220, 169 USPQ 367 (CCPA 1971). Applicants emphasize that a patent disclosure is directed to one having ordinary skills in the art. *In re Howarth*, 654 F.2d 103, 210 USPQ 589 (CCPA 1981). Moreover, and quite significantly, it has been repeatedly held that the scope of enablement varies inversely with the degree of predictability in the art, i.e., enablement is a function of the complexity of the involved subject matter. *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 15 USPQ2d 1321 (Fed. Cir. 1990); *U.S. v. Telectronics Inc.*, *supra*. Applicants also stress that a patent specification is presumed enabling in the absence of a reason to doubt the objective

truth of the statements contained therein. *In re Cortright, supra; In re Brana, supra; In re Marzocchi, supra.*

In applying the above legal tenets to the exigencies of this case, Applicants submit that the Examiner did not establish a *prima facie* basis to deny patentability to the claimed invention under the first paragraph of 35 U.S.C. § 112 for lack of adequate enabling support. Specifically, the Examiner has not overcome the presumption of enablement, as by advancing technological reasoning to doubt the statements in the specification, or by establishing that the claimed invention is inherently unbelievable or involves implausible scientific principles. *In re Cortright, supra.*

In this respect Applicants submit that the Examiner's interpretation of the claimed invention is not realistic, ignores express claim language and is **not** how one having ordinary skill in the art would have interpreted the claimed invention. Specifically, as expressly set forth in claim 3, for example, the invention is concerned with amplifying **signal light**. In other words, the indicated wavelength range is, as the claims say, **for signal light**.

The Examiner's theoretical extrapolation of the claimed invention ignores the requirement for amplifying **signal light**, because microwave radiation and radio waves, for example, are not amplification targets of the claimed invention involving **signal light** amplification, as would have been understood by one having ordinary skill in the art.

Similarly, the Examiner's interpretation that the claimed invention is inclusive of " $f=0$ " is unrealistic and inconsistent with how one having ordinary skill in the art would have interpreted the claimed invention. This is because the claimed invention relates to amplifying **signal light** and, hence, one having ordinary skill in the art would have understood that  $f$  could not equal 0.

Based upon the foregoing Applicants submit that one having ordinary skill in the art would have no difficulty practicing the claimed invention armed with the supporting specification without undue experimentation. *In re Cortright, supra*. Applicants, therefore, submit that the imposed rejection of claims 2 through 12, 28 through 34, 39, 41 and 45 through 79 under the first paragraph of 35 U.S.C. § 112 is not legally viable and, hence, solicit withdrawal thereof.

**Claims 8 and 10 were rejected under the first paragraph of 35 U.S.C. § 112 for lack of adequate enabling support.**

In the statement of the rejection the Examiner asserted that the supporting disclosure does not enable the rejected claims because the expression “wherein the bandwidth exceeds 50 nm” is open ended. This rejection is traversed.

Again, the Examiner did not discharge the initial burden of establishing that **one having ordinary skill in the art** would not have been able to practice the claimed invention, armed with the supporting specification, without undue experimentation by overcoming the presumption of enablement, as by advancing technological reasoning to doubt the statements in the specification or by establishing that the claimed invention is inherently unbelievable or involves implausible scientific principles. *In re Cortright, supra*. Specifically, and as previously pointed out, the Examiner’s interpretation of the claimed invention is inconsistent with how one having ordinary skill in the art would have interpreted the claimed invention. This is because the indicated range relates to **signal light** and, hence, confined within **signal light**.

The Examiner's theoretical extrapolation of the claimed invention beyond **signal light** is unjustified and inconsistent with the manner in which how one having ordinary skill in the art would have interpreted the claimed invention.

Based upon the foregoing Applicants submit that the imposed rejection of claims 8 and 10 under the first paragraph of 35 U.S.C. § 112 is not legally viable and, hence, solicit withdrawal thereof.

**Claims 2 through 10, 28 through 34 and 45 through 65 were rejected under the first paragraph of 35 U.S.C. § 112 for lack of adequate enabling support.**

In the statement of the rejection the Examiner asserted that the disclosure "... does not reasonably provide enablement for a gain non-uniformity of 0%\*" (first paragraph on page 5 of the February 3, 2006 Office Action). This rejection is traversed.

Again, the Examiner did not provide a basis upon which to predicate the ultimate legal conclusion that one having ordinary skill in the art would not have been able to practice the claimed invention, along with the supporting specification, without undue experimentation. The Examiner did not overcome the presumption of enablement as by advancing technological reasoning to doubt the statements in the specification, or by establishing that the claimed invention is inherently unbelievable or involves implausible scientific principles. *In re Cortright, supra*.

Specifically, the wording "so as to yield a relative gain non-uniformity of less than 25%" is clearly distinguishable from "so as to yield a relative gain non-uniformity of 0%" as interpreted by the Examiner. This is because the claim wording merely describes a target value

of amplification control and, hence, would have been understood by one having ordinary skill in the art to mean “so as **not** to yield a relative gain non-uniformity of 25% **or larger**”.

In other words, in accordance with the claimed invention, control can be achieved when the relative gain non-uniformity simply decreases as, for example, from 26% to 24%. As one having ordinary skill in the art would have understood, it is **not**, repeat **not**, an object of the present invention to yield a relative gain non-uniformity of 0%. Simply put, the Examiner’s interpretation far exceeds the scope of the rejected claims by intentionally assuming an impossible case where a relative gain non-uniformity is zero.

The bottom line is one having ordinary skill in the art would never have interpreted the claimed invention to encompass a relative gain non-uniformity of 0%. Repeat, technologically speaking, it is inconceivable that one having ordinary skill in the art would have interpreted the claimed invention to encompass an impossible case of wherein the relative gain non-uniformity is 0%. On the other hand, apart from interpreting the claims unreasonably and inconsistent with the written description of the specification, and inconsistent with how one having ordinary skill in the art would have interpreted the claimed invention, the Examiner has not provided any support for the asserted legal conclusion of non-enablement under the first paragraph of 35 U.S.C. § 112.

Applicants, therefore, submit that the imposed rejection of claims 2 through 10, 28 through 34 and 45 through 65 under the first paragraph of 35 U.S.C. § 112 for lack of adequate enabling support is not legally viable and, hence, solicit withdrawal thereof.

Based upon the foregoing it should be apparent that the imposed rejections have been overcome, and that all active claims are in condition for immediate allowance. Favorable consideration is, therefore, solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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